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82L/11W

M Map 21/53.
Peter Peto.
734-9474BONNIE BRAE Ag-Sn MINERAL PROSPECT

LOCATION: N.T.S. 82L/11W Lat. 50.68° Long. 119.28°
Kamloops Mining Division Elevation: 800 m
Mineral Inventory No: 82L/7NW

ACCESS: The claims are assessed by road a distance of some 4 miles from Salmon Arm town center.

PROPERTY DEFINITION: The Bonnie Brae claims (record No: 4340) presently consist of 6 units (3Sx2E) recorded on 9 February 1983.

PROPERTY DEFINITION: Exploratory adits driven on quartz veins bearing argentiferous galena on the north face of Mt. Ida, were first reported by Brewer (1913) and subsequently by Ferrier (1920) who also reported values in gold and platinum. Some work at the foot of Hobson Creek was reported in the BCDM annual report 1930 (p.183) after which the properties were abandoned until 1967 when Annmar Mining financed a program of trenching (Mitchell, 1976).

REGIONAL GEOLOGY: The claims underlay a tectonically complex zone of cambro-ordovician basement schists and gneisses belonging to the Silver Creek Formation which are covered by Upper Triassic argillites and limestones belonging to the Sicamous Formation. These have been intruded by early Cretaceous granites of the Salmon Arm batholith and subsequently injected and covered by Eocene volcanics of the Kamloops Formation.

PROPERTY GEOLOGY: The old workings are confined to quartz veins and shear zones, trending predominantly to the NE, along a contact zone between granite and quartzites, limestones and quartz sericite schists. The zones are often fractured and sometimes ribboned and were reported to carry three stages of mineralization:

- (i) Quartz + pyrite + arsenopyrite + fluorite + Sn(?)
- (ii) Chalcopyrite + sphalerite + galena
- (iii) + marcasite + argentite + cosalite + sphalerite

The presence of tin, tourmaline, sericite, pyrite and quartz is also indicative of a zone of greisen alteration. Disseminated sphalerite was said to occur in schists (Mitchell, 1967). A preliminary evaluation is suggestive of a complex, telescoping, hydrothermal vein system associated with the Salmon Arm granite, which warrents further investigation.

WORK PROPOSAL: A program of detailed mapping, soil sampling and VLF-EM surveying along the granite-schist contact zone is recommended, with the object of deliniating suitable drill targets.

REFERENCES:

- Brewer, W.M. (1913) BCDM annual report p.198-199.
 Ferrier, W.F. (1920) Munition Resources Commission p.183-185.
 Jones, A.G. (1959) G.S.C. Mem. 296
 (1930) BCDM annual report p.183-184
 Mitchell, J.A. (1967) Prospectus report; Annmar Mining Co. 9pp.
 Okulitch, A. (1979) G.S.C. open file 637.

The valley of the Salmon river towards the south averages about a mile wide, and is thickly settled, with large well-cultivated orchards, as well as fields of oats, wheat, timothy, clover, and vegetables.

I examined the *Mount Ida* group of claims on September 18th; it is located at an elevation of about 1,000 feet above Shuswap lake, on the side of Mount Ida, about five miles south-east from the town of Salmon Arm.

The apex of Mount Ida has an altitude of 5,200 feet and is reached by wagon-road to the base of the mountain, and thence by good horse-trail. The group composes the *Everglade*, *Excelsior*, *Leah Rose*, *Alida*, and *Eva* mineral claims, owned by the Mount Ida Mining and Development Company of Salmon Arm, of which Alex. Miller, of the same place, is president and general manager.

The rock formation in the immediate vicinity belongs to the rock classed by Dr. Dawson as the "Shuswap series," made up of mica-schist, grey gneiss, crystalline limestone, and quartzites. In this occurs a system of parallel ore-bodies, from 18 inches to 7 feet wide, composed of galena in a quartz gangue; these appear sometimes to be contact deposits between the micaceous schist and quartzite, and at other places between the schist and marble. The strike of these generally is approximately north-east, and dip from an angle of 65 degrees to almost vertical towards the south-east.

All the development-work has been performed on the *Everglade* mineral claim, and consists of 346 feet of underground work, as follows: Upper adit 130 feet long, at an elevation of about 1,000 feet above the lake; this crosscuts the mica-schist formation for about 100 feet, then a seam of quartz between 6 and 7 feet wide carrying quite an appreciable percentage of galena, then limestone forming the footwall. From this point a drift has been run, but, owing to caving of the roof from slacking, this could not be closely examined; however, I was able to take a sample from the face typical of the ore-body, but not intended to represent an average of the entire ore-body as it would be mined. This sample assays: Gold, trace; silver, 7 oz. per ton.

A lower adit had been driven 230 feet with the intention of driving under the upper adit, at a vertical depth below it of about 260 feet, but has not yet been driven sufficiently far to reach the point aimed at. Near the face of this adit the water that percolates through the strata and cleavage-planes of the country-rock is blood-red, evidently from iron stains, and there is also a considerable quantity of iron-pyrites disseminated through portions of the rock, apparently indicating that a mineralized zone might be looked for as the work progressed. At the portal of this adit a body of quartz carrying some galena was exposed, but this had the appearance of having been broken off and having slipped from a higher elevation.

An ore-body outcrops at a point about 50 feet vertically above the upper adit, where a shaft was sunk 16 feet deep, in which is exposed a quartz vein, 18 inches wide, carrying galena; it is apparently wider on the north-east side of the shaft than on the south-west side. It is doubtful whether this is the same ore-body as is exposed in the upper adit, although it may be.

Two other outcroppings of the same character of ore occur, one at about 100 feet lower elevation than the shaft referred to, and another about 60 feet still lower down the mountain, but a short distance north of a direct line between the two last mentioned. On the first of these a shallow open-cut has been made, while on the last named there is an open-cut and shaft; this has been sunk about 15 feet deep below the bottom of the cut, in which is exposed an ore-body about 3 feet wide of quartz carrying galena.

Unless a body of solid galena property could be operated at a position this would appear to

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There are, I was reliably informed, which the same character of ore of the owners nor any one being done on any, I did not have the best information I could gather as had been performed on t

On September 19th I left Salmon Arm to ride back over the road. The steamer "Andover" plies between Salmon Arm.

The village of this name is on Shuswap lake, and about forty miles from the southern end.

Seymour Arm has no wagon roads, built by the Government, but a logging camp on the Seymour with a pack-trail up the North fork known as the Cotton-belt summit north from Seymour Arm. It is possibly be; in fact, so bad that it is found for packing in supplies down

On September 21st, Sunday. During the day, after some delay, Samloops, who is interested in the mine, made all preparations for an early start accomplished.

After crossing the Seymour river I left the wagon-road and rode along a belt of good cedar timber for about 10 miles. At this elevation, the river-valley is quiet and good drainage. Beyond we have heavy fogs and windstorms in the past which of it was covered by rock-boulders which are for the most part considered to belong to the Gold River.

About four miles from Seymour Arm, tributary of the Seymour river, we found oxidized iron boulders of various sizes of some of the varieties of iron ore carrying gold, silver, and copper. It is produced some placer gold in y

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Unless a body of solid galena of some extent can be found, it is hardly probable that this property could be operated at a profit by shipping the crude ore direct, but as a concentrating proposition this would appear to be an ideal one.

A very good supply of timber, especially of cedar and some pine, excellent for mining timbers, is on the mountain about 300 yards distant from the mine-workings, but at a lower elevation.

There are, I was reliably informed, a number of other mineral claims in the vicinity on which the same character of ore occurs under very similar conditions, but, as I did not meet any of the owners nor any one who was conversant with the locations, and as no work was being done on any, I did not have an opportunity of making an examination of them. From the best information I could gather, though, there had not been done any such quantity of work as had been performed on the *Mount Ida* group.

On September 19th I left Salmon Arm for Seymour Arm, but in order to reach the latter I had to ride back over the road to Shuswap and thence to Chase, from which point the stern-wheel steamer "Andover" plies up Shuswap lake and touches at several points, but not at Salmon Arm.

SEYMOUR ARM.

The village of this name is situated at the extreme northern end of the Seymour arm of Shuswap lake, and about forty miles by water from Chase, which is situated at the extreme southern end.

Seymour Arm has no wagon-road connection with any other point on the lake, but there are some roads, built by the Government, to the homes of settlers in the vicinity, and one to a logging camp on the Seymour river, about three miles from the village, where it connected with a pack-trail up the North fork of the river. This was my route to the section locally known as the Cotton-belt summit, situated, about twenty-five miles by the trail, a little east of north from Seymour Arm. This trail I found to be in about as bad a condition as it could possibly be; in fact, so bad that the prospectors near the summit have been paying 8 cents a pound for packing in supplies during the summer.

On September 21st, Sunday, this section was visited by a continual downpour of rain. During the day, after some delay, I secured a pack-horse and supplies, and, with Joe Blais, of Kamloops, who is interested in the Cotton-belt country accompanying me as a guide, made all preparations for an early start on the following morning, September 22nd, which we accomplished.

SEYMOUR RIVER TRAIL.

After crossing the Seymour river about two miles from the village on a good ferry, we left the wagon-road and rode along an old trail in a general northerly direction through a belt of good cedar timber for about two miles; bordering the trail, but about 50 feet lower elevation, the river-valley is quite wide and would appear to be made up of good soil, but needing drainage. Beyond we entered a section of country through which destructive forest fires and windstorms in the past years had played havoc. The valley here was not so wide, and much of it was covered by rock-slides from the high mountains on each side. These mountains, which are for the most part composed of mica-schists and gneiss, are stated by Dr. Geo. M. Dawson to belong to the Gold range.

About four miles from Seymour arm, at a point where the trail crosses a wide creek, a tributary of the Seymour river, there are, mixed with the gravel in the bed of the creek, many oxidized iron boulders of various sizes, well rounded and water-worn, indicating the presence of some of the varieties of iron mineral, most probably iron-pyrite, with possibly ore-bodies carrying gold, silver, and copper, at some point up the creek, which has, I was reliably informed, produced some placer gold in years gone by.

1913

of No. 3 District:—

Silver.	Copper.	Lead.
Oz.	Lb.	Lb.
5	1,200
.....
73,724	29,825	576,607
19	210
89
27
73,864	31,235	576,607

that year.

references that was published in the

Author.
C. E. Cairnes.
N. F. G. Davis.

for the years 1929 and 1930, which is 100 per cent. in the volume of prospecting

MINES LEASES ISSUED.	CERTIFICATES OF WORKING	
1930.	1929.	1930.
213	388	369
57	129	113
192	402	371
87	79	78
276	636	500
108	167	210
77	126	93
1,010	1,927	1,732

SECTION.

property, situated on a plateau level and lying at a distance of about 10 miles from the northern arm, one of the branches of the mountain range is represented by pyrrhotite, magnetite and the flat-dipping schist formation. This occurrence has properties in common with the other occurrences in the belt of territory on the northern

and eastern boundaries of the district. Thus there is a certain relation between the mineral occurrence on this property and the silver-lead-zinc deposits around the Shuswap lakes; the very similar occurrences, on the Adams plateau; the silver-lead veins associated with barite at Squaam (Squaam) bay on Adams lake, and, in lesser degree, the mineralized horizons in the barite-schists of the Barriere River area, as well as the base-metal veins in quartzite in the Garwater area at the head of the North Thompson river. In most of these cases exposures are found at high altitudes and development has been retarded by difficulties of access. This matter of transportation has been a serious factor in connection with the Cotton Belt property, which requires for its development an amount of work that can only be accomplished by means of power-drills operated by more or less heavy machinery, and the grade of the ore is not such as to encourage operations carried on on any lesser scale.

Prospecting-work on this property, owned by J. T. Lauthers and associates, on a ridge between White lake and Blind bay, did not result in the discovery of ore of economic grade, although there is a considerable amount of copper mineralization disseminated throughout a wide zone in a schist formation. It is possible that development at a greater depth would encounter better results.

Copper Chief. Surface workings have uncovered several exposures of copper ore, chiefly chalcopyrite, associated with quartz, along the same general direction of shearing in which the seams on the *Copper Chief* are found. The same observation applies in regard to the need for deeper development.

Bonnie Brae. This group of four claims, owned by Daggett & Cox, of Salmon Arm, is situated on the northern slopes of Mount Ida, at an elevation of about 1,500 feet above the valley of the Salmon river. Some further work has been carried out by the owners, as a result of which some better evidence of the character of the mineralization is afforded. The mineral occurrences on this group are represented by extensive bodies of quartz, containing pyrite and some blende and galena carrying silver values and a little gold. This quartz occurs in zones of shearing and fracturing in impure quartzites and schists, traversed by dykes of feldspar porphyry. A number of open-cuts strung out in a general direction of N. 60° E. (mag.) exposes a series of these quartz-bodies varying up to 6 feet in thickness, which appear to lie within a dominant zone of fracturing. The most north-easterly of these open-cut exposures lies at a vertical distance of about 250 feet above the bed of Hobson creek (locally known as Hobson creek), which follows an oblique course down the slope of the mountain in a north-westerly direction. From a point on the steep bank of this creek, lying almost due north from the outcrop above mentioned, a tunnel has been driven for a distance of about 70 feet in a general southerly direction, following the course of a porphyry dyke which lies on the western side of a zone of shearing, having a dip of about 50° to the north-east. The ground in the neighbourhood of the dyke is much disturbed and the width of the zone cannot be stated definitely; a characteristic feature is the inclusion of bodies of quartz, one of which is also exposed in the bed of the creek about 50 feet farther to the east, indicating a width of about 50 or 60 feet for the zone. The new work above referred to was done on the *Foothill* in a canyon of the same creek at a distance of approximately three-quarters of a mile to the north-west of the upper workings of the *Bonnie Brae* group, and about 1,200 feet below them. A zone of shearing in the same schist and quartzite formation is exposed in open-cut workings at a sharp bend of the creek. This zone has a north-westerly strike and a dip of about 50° to the north-east, and the inclusion of quartz associated with a considerable amount of pyrite is in all respects similar to that found in the upper workings. It is indicated that the two sets of workings are on the same zone of shearing, which is in all probability responsible for the direction taken by the creek in its oblique course across the hillside occupied by a hard quartzite formation.

In these lower workings there is also a considerable amount of massive pyrrhotite on the west wall side of the zone, and this is not without significance, occurring as it does at the lowest point at which this apparently persistent shear has been exposed. The upper line of outcrops above referred to, following a north-easterly direction, appear to occupy fractures in a greatly disturbed section of the formation intersected by the porphyry dykes, and all these occurrences are to be referred probably to a main source of mineralization along the shear-zone. The whole of Mount Ida is underlain by granite, and it is in this connection that the occurrence of heavy sulphide mineralization in the lower workings is held to afford some encouragement for

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1930
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further development along the line of shearing in the overlying quartzite. The following samples were taken:—

A picked sample of quartz from the face of the 70-foot tunnel: Gold, trace; silver, 1 lb. to the ton. Quartz from *Foothill*: Gold, trace; silver, trace. Quartz on hanging-wall of strike in 70-foot tunnel: Gold, trace; silver, 0.6 oz. to the ton. Quartz from upper open-cuts in quartz fractures: Gold, trace; silver, 6 oz. to the ton. Pyrrhotite from *Foothill*: Gold, trace; silver, trace; zinc, trace.

This group of eight claims is situated on Mount Ida, near Salmon Arm. The main veins occur on the property; the lower vein was developed to some extent several years ago and carried values in silver and lead. The upper vein has been reported to carry values in gold and platinum, but no further information is available in regard to this occurrence than was furnished in the account given by W. F. Ferguson and published in the Final Report of the Munition Resources Commission in the year 1920.

The property is now owned by Sunset Mines, Limited, with head office in Salmon Arm. It is understood that further work is to be commenced during the coming year.

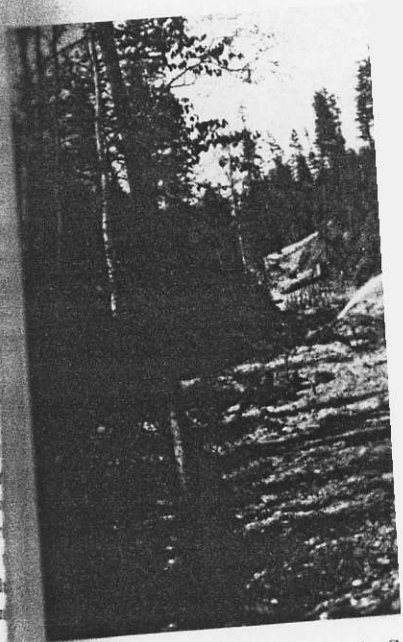
Sunset. This property is situated at a distance of about a mile to the south-east of the *Grandview* and is owned by Edwin Smith and associates, of Grindrod. Some open-cutting work has been done to prospect the continuation of a well-defined quartz vein in the quartzite formation in which some gold values, associated with pyrrhotite, were found. The general direction of this vein is in a line with the mineral occurrence on the *Grandview* property. The hardness of the rock has made it difficult for the individual prospectors, working by hand, who have not been able to do sufficient work to enable a definite opinion of the value of this property to be given.

Grandview. This property, situated in the broken country west of Grindrod and about two miles east of Salmon Arm, covers a portion of the mineralized area in which scattered gold values are found in quartzose segregations in a quartzite formation, together with some base-metal mineralization in quartz veins, cutting a black argillite, lying in contact with the quartzite. At the present time no continuous lead has been discovered. The property is owned by E. R. Sutton and associates, of Grindrod.

These properties, owned by H. McGillivray and associates, of Shuswap, were referred to in former Annual Reports as the *Elsie* group. This claim consists of the *Lucky Coon*, *Lucky Strike*, *White Swan*, *Elsie*, and *Billie*, adjoining one another in a general north-east and south-west direction, with additional claims lying alongside them to cover the downward continuation of the mineralized zones on their flat dip.

At the north-east end of these claims the strike of the lead is found to be continuous for a distance of about 2,000 feet; a gap of about 1,000 feet follows in which no exposures have been found; there is then an occurrence on the *White Swan* where a similar body of mineralization is found having the same strike and dip, but lying at a distance of 320 feet to the west. At a distance of about 300 feet south-west of this showing another lead of high-grade mineralization is found on the same line of strike as the first-named (*Lucky Coon*) lead, and at a distance of about 1,500 feet farther to the south-west, on the banks of Spillman creek, an attractive vein is exposed on the *Elsie*, lying at a further distance of 300 feet to the west from that on the *White Swan*. The continuation of this ore-body is found in a series of open-cuts extending over the *Billie* towards the south-west for a distance of 1,500 feet.

The greater number of the open-cuts on this property were made by Granby Mining, Smelting, and Power Company, which held the property under option some two years ago and also carried out a limited programme of diamond-drilling. Starting from the north-east end of the *Lucky Coon*, two diamond-drill holes were put down at an angle of 60° to intersect the *Lucky Coon* ore-body below the outcrop exposed in a big open-cut. At a distance of some 300 feet to the south-west another diamond-drill hole was placed below an outcrop exposed in an open-cut at about 100 feet higher up the hill. At a further distance of about 700 feet indications on the surface point to splitting and divergence of the ore-bodies. Two distinct occurrences, having strikes respectively of N. 20° E. and N. 50° E. (mag.), are exposed in open-cuts. The appearance of this section of the ground supports the view of a wide mineralized zone in which individual leads at the surface might be expected to indicate bodies of greater importance at some depth. Below this point two diamond-drill holes were put down.



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